

CLAIMS

1. A composition comprising at least one polyamide matrix and a dispersed phase composed of at least one impact modifier, said dispersed phase containing at least one electrically conductive filler.
2. The composition as claimed in claim 1, characterized in that it contains from 0.1 to 40% by weight of electrically conductive fillers relative to the total weight of the composition.
3. The composition as claimed in either of claims 1 and 2, characterized in that it contains from 0.1 to 70% by weight of impact modifiers relative to the total weight of the composition.
4. The composition as claimed in any one of claims 1 to 3, characterized in that the electrically conductive fillers are chosen from the group comprising: carbon black, a metal, an antistatic agent, graphite, glass and/or a mineral filler coated with a metal layer, and/or mixtures thereof.
5. The composition as claimed in any one of claims 1 to 4, characterized in that the electrically conductive fillers are chosen from the group comprising: carbon black; carbon fibers; carbon spheres or microspheres; carbon nanotubes; steel spheres, microspheres and/or fibers and/or aluminum spheres, microspheres and/or fibers; and polyetheramides.
6. The composition as claimed in any one of claims 1 to 5, characterized in that the impact modifier is an elastomer.

7. The composition as claimed in any one of claims 1 to 6, characterized in that the impact modifier is chosen from the group comprising: ethylene-propylene copolymer (EP), ethylene-propylene-diene terpolymer (EPDM), styrene/maleic anhydride copolymers (SMA), ultra-low-density polyethylene (ULDPE), linear low-density polyethylene (LLDPE), styrene/ethylene-butadiene/styrene copolymer (SEBS), polypropylene (PP), acrylic elastomers (such as polyacrylic elastomers), ionomer elastomers, acrylonitrile-butadiene-styrene terpolymer (ABS) and acrylic-styrene-acrylonitrile terpolymer (ASA).
8. The composition as claimed in any one of claims 1 to 8, characterized in that the polyamide matrix is composed of at least one polyamide chosen from the group comprising:
- polyamides: 6; 6,6; 4,6; 6,10; 6,12; 11 and/or 12; or blends thereof;
  - copolyamides: 6/6,6; 6/6,9; 6/6,10; 6/6,18 and/or 6/6,36; or blends thereof; and/or
  - blends of polyamides: 6 and 6,6; 6 and 6/6,18; 6 and 6/6,36; 6 and 6/6,10; or blends thereof.
9. Process for producing a composition as claimed in any one of claims 1 to 8, which comprises at least the following steps:
- a) blending at least one impact modifier with at least one electrically conductive filler, so as to obtain a masterbatch; and
  - b) blending the masterbatch obtained in step a) with at least one polyamide matrix.
10. An article obtained by carrying out a forming operation on a composition as claimed in any one of claims 1 to 8.

11. A masterbatch intended to be incorporated into a polyamide-matrix-based composition and comprising at least one electrically conductive filler and at least one impact modifier.  
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12. The masterbatch as claimed in claim 11, comprising from 20 to 60% by weight of electrically conductive fillers relative to the total weight of the masterbatch.  
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13. The masterbatch as claimed in either of claims 11 and 12, comprising from 20 to 80% by weight of impact modifiers relative to the total weight of the masterbatch.  
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14. The use of a composition as claimed in any one of claims 1 to 8 for the manufacture of an article intended to be painted by an electrostatic paint deposition process.  
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